

WEBINARS FOR CONTINUOUS MEDICAL EDUCATION DURING COVID-19: A CROSS-SECTIONAL SURVEY OF ATTENDEES' PERSPECTIVES

Kiran Hilal,¹ Zia Faruqi,² Najam ud Din,³ Mukhtiar A. Memon,⁴ Ummara Siddique,⁵ Khawaja Khurshid⁶

¹ Department of Radiology, Aga Khan University Hospital (AKUH), Karachi, Pakistan.

² Aznestic Diagnostic Centre, Lahore, Pakistan.

³ President Radiological Society of Pakistan (RSP), Pakistan.

⁴ Department of Radiology, Dow Medical College / Civil Hospital, DUHS, Karachi, Pakistan.

⁵ Department of Radiology, Rehman Medical Institute (RMI), Peshawar, Pakistan.

⁶ Department of Radiology, Rashid Latif Medical College, Lahore, Pakistan.

PJR April - June 2021; 31(2): 123-128

ABSTRACT

PHENOMENON: Teaching through virtual learning such as webinars has been found to be a useful medium in continuing medical education for undergraduate and postgraduate medical education, and many similar professional educational streams. COVID 19 pandemic presented an opportunity to innovate teaching and learning method using technologies which allow redesigning virtual online learning and education. To control and combat the spread of the disease, physical attendance at workshops, conferences, and symposiums have come to a halt to observe social distancing measures and distant learning systems hence gained preference. To assess the accessibility, adaptability, and convenience of the medical profession through virtual learning and how effective it was during the COVID-19 pandemic among medical professionals in Pakistan. **APPROACH:** 12 CME sessions were conducted through webinars between June to December 2020. The attendees consisted of radiologist/non-radiologist physician /radiology technicians who are clinically practicing in the same capacity at a different hospital and/or clinics around the world. All those who registered and attended the webinar participated in the survey. At the end of each webinar, a feedback survey was shared with all the participants online comprising of pre-structured questions. The participants answered the questions, and the responses were recorded through online polling. The duration of each webinar was 60 to 80 mins. **FINDINGS:** Total 332 participants attended the first and second webinars comprising of similar set of questions, whereas 82 participants third webinar with a different set of questions to probe the responses of the first two webinars. Most of the participants did not face any technical problem in joining or during the sessions (94.4%) and 68.8% of attendees preferred weekend day (Sunday) as an ideal day for attending webinar. Multitasking was a common trait among attendees' behavior during webinar activity, the majority of which was related to eating or preparing food. CME based activity through the webinar, almost all attendees agreed to the response (99.2%). **INSIGHTS:** Future after the COVID 19 pandemic regarding continuous medical education is unpredictable, however, a hybrid model of including virtual learnings through various platforms will be more efficiently used.

Phenomenon

Webinars are synchronous, real-time online meeting events that gather an audience together at a specific time to observe, participate and listen to in a presen-

tation,¹ and have been extensively used for interdisciplinary learning during the pandemic.² They are comprised of a flexible teleconferencing medium that

Correspondence : Dr. Kiran Hilal
Department of Radiology,
The Aga Khan University Hospital,
Karachi, Pakistan.
Email: kiran.hilal@aku.edu

Submitted 6 June 2021, Accepted 17 June 2021

allows each participant to access the content from different geographical locations and time zones.³ It allows audio and visual connection and interaction between at least two sites forming the basis of virtual learning platforms between the presenter and audience.

Teaching through virtual learning such as webinars has been found to be a useful medium in continuing medical education (CME) for undergraduate and postgraduate medical education, and many similar professional educational streams. These platforms are not a new means of communication rather they were introduced and in practice even before the COVID 19 pandemic.⁴ The adaptation of CME by academic institutions and hospitals proved to be an easy, quick, and beneficial solution to continue the educational development in well-organized systems of medicine, with added benefits of time and costs saving when done through webinars.⁵ Students have previously been benefited from access to accredited continuing education from remote and rural locations and the webinar method was considered a preferred distance learning technique.⁶ Besides, text communication during the webinars has made interactions and networking easier, connecting the audience with similar questions and learning experiences.⁷

Considering the recent spread of the global pandemic, the world was exposed to a different experience in all dimensions of professional and personal lives. Individuals belonging to healthcare were affected by COVID-19 at different levels, where they had to perform day-to-day patient care responsibilities, align family commitments as well as keep a track of professional development. Fortunately, we live in an era where our day-to-day activities have been made easier with the use of technology.⁸ The COVID 19 pandemic presented an opportunity to innovate teaching and learning method using technologies which allow redesigning virtual online learning and education.⁹ To control and combat the spread of the disease, physical attendance at workshops, conferences, and symposiums have come to a halt to observe social distancing measures and distant learning systems hence gained preference.¹⁰ Moreover, to deliver high-quality medical education for professionals, to ensure the safety of the participants and to maintain efficient tele-education (e-learning) became part of the regular training system at various institutes.¹¹

Radiological Society of Pakistan (RSP) started the virtual CME activities during the pandemic in June 2020 through webinars and short online courses, when due to social distancing in-person activities were restricted limiting the means of professional development. The purpose of gathering feedback from the participants of CME activities was to gain insights on the acceptance for conducting such activities online, and how likely they are willing to participate in these activities in future. The questions were designed in such a way to gather responses on non-traditional aspects affecting the life of medical professionals during the COVID 19 pandemic and how online education has gained popularity and feasibility in their new routine practices. The objective of this survey was hence to assess the accessibility, adaptability, and convenience of the medical profession through virtual learning and how effective it was during the COVID-19 pandemic among medical professionals in Pakistan.

Approach

A total of 12 CME sessions were conducted through webinars from the period between June to December 2020. Out of these during 3 sessions feedback survey was shared with the participants. Details of the feedback responses are tabulated in (Tab.1 and Tab.2). The attendees of the online webinars consisted of radiologist/non-radiologist physician /radiology technicians who are clinically practicing in the same capacity at a different hospital and/or clinics around the world. Prior registration was mandatory for all the participants to attend the webinar, and all those who registered and attended the webinar participated in the survey.

Each webinar covered a specific topic related to radiology and an online video was shared with the participants followed by case study discussion and questions answers from the participants. At the end of each webinar, a feedback survey was shared with all the participants online comprising of pre-structured questions. The participants answered the questions, and the responses were recorded through online polling. The duration of each webinar was 60 to 80 mins.



| Questions | Frequency (n) | Percentage (%) |
|---|---------------|----------------|
| Did you encounter any technical problem in joining and during this webinar? | | |
| No | 236 | 94.4 |
| Yes | 14 | 5.6 |
| Do you find this RSP* webinar-based CME activity more effective and convenient than venue based? | | |
| No | 20 | 8.0 |
| Yes | 230 | 92.0 |
| Which is the ideal day of the week for you to attend such webinar-based activities? | | |
| Ate/cooked food | 126 | 50.4 |
| Exercise/physical activity | 62 | 24.8 |
| Facebook/WhatsApp/Netflix | 62 | 24.8 |
| What should be the ideal duration of such a webinar if conducted in future? | | |
| 30-60 mins | 106 | 42.4 |
| 60-120 mins | 30 | 12.0 |
| 60-90 mins | 114 | 45.6 |
| Would you like RSP* webinar activities to continue after the COVID 19 Pandemic? | | |
| No | 2 | 0.8 |
| Yes | 248 | 99.2 |

*RSP= Radiological Society of Pakistan

Table 1: Participant's responses with respect to webinar-based activity(n=250)

These webinars were conducted in collaboration with the Radiological Society of Pakistan (RSP). Its executive committee's approval was sought before the collection of data. Informed consent was obtained from the participants before starting the survey stating that the collected data can be used for research and dissemination purposes. Personal and demographic details including name, location of practice, designation and gender were recorded. To maintain the confidentiality of participants demographic information was anonymized.

Findings

Of the 332 participants, a total of 250 participants attended the first two webinars as shown in (Tab.1). The first two webinars comprised similar questions answered during the feedback survey.

| Questions | Frequency (n) | Percentage (%) |
|--|---------------|----------------|
| The reason why didyou attend this webinar? | | |
| Fan of the speakers | 2 | 2.5 |
| For CME hours | 3 | 3.6 |
| To update my knowledge | 77 | 93.9 |
| Any technological issue you faced during the duration of the webinar? | | |
| Power outages | 8 | 9.8 |
| Unavailability of technology devices | 4 | 4.8 |
| Slow internet speed | 70 | 85.4 |
| During webinars, do you feel missing face-to-face interactions with the speaker and colleagues? | | |
| No | 51 | 62.2 |
| Yes | 31 | 37.8 |
| Web-based activities allow you multitasking or does it distract/divide your attention? | | |
| Get distracted | 10 | 12.2 |
| Allow multitasking | 72 | 87.8 |
| Do you feel more comfortable typing your questions rather than asking verbally from the speakers? | | |
| No | 9 | 10.9 |
| Yes | 73 | 89.1 |

Table 2: Participant's responses probing for reasons and perspectives for online webinar attendance (n=82)

The third webinar was attended by 82 participants comprised of a different set of questions to probe the response of the first two webinars which has been shown separately in (Tab.2).

Most of the participants did not face any technical problem in joining or during the sessions (94.4%) and 68.8% of attendees preferred weekend day (Sunday) as an ideal day for attending webinar (Tab.1 and Fig.1). Multitasking was a common trait among attendees' behavior during webinar activity, the majority of which was related to eating or preparing food. For the final question to continue CME based activity through the webinar, almost all attendees agreed to the response (99.2%). Further probing from 82 participants who attended the webinar showed that the main perspective to attend online webinars is to gain the updated knowledge (93.9%), slow internet speed affected 85.4% of the participants, and 89.1% participants are more comfortable typing questions rather than speaking (Fig.2).

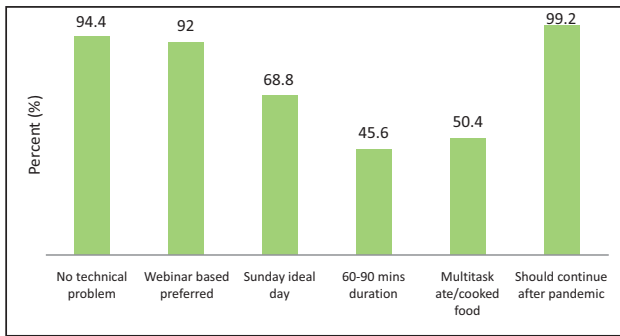


Figure 1: Distribution of responses from participants during the first two webinars (n=250)

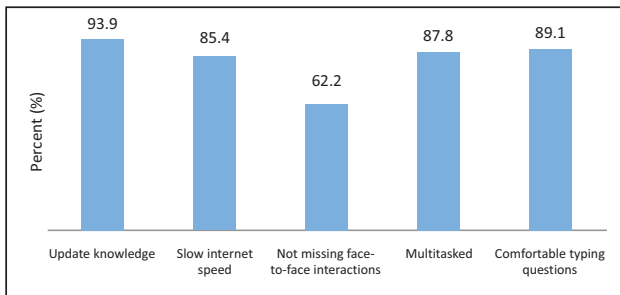


Figure 2: Distribution of responses from participants during probing for reasons and perspectives for online webinar attendance (n=82)

Insights

Our study surveyed the perspectives of participants based on a virtual education platform as one of the initial studies conducted in Pakistan, based on data from a healthcare professionals' perspective. Reporting of minimum technological disruptions and a verdict to continue webinar-based education delivery prove that webinars have become a source of accessibility, adaptability, and convenience for medical learning virtually during the pandemic. The results show promising numbers, uplifting the fact that webinars have a high success rate for a virtual learning platform during the pandemic which had otherwise put restrictions on physical learning.

COVID 19 pandemic has taught institutions to think openly about positive and successful changes that they must adopt to make learning easier and comfortable for the audience. The results highlight the importance of the need to adopt a system that can work in line with the barriers faced by the pandemic regarding learning virtually. A recent study based on healthcare professionals showed high

satisfaction on the similar virtual learning-based model,¹² results of which are supported by our study where participants showed confidence and satisfaction for virtual platforms, enabling them to participate, learn and multitask without significant technological problems. On the other hand, the results may not give a holistic image of different fields of learning that take place virtually online through different platforms.

During the COVID 19 pandemic, applications such as Zoom, Skype, Web X, Google Meet, and GoTo Meeting are being used as virtual platforms for lectures and teaching sessions. The effectiveness of webinars as virtual learning platforms has been reported in a recent meta-analysis of randomized controlled trials, results of which indicated a similar finding of our survey.¹³ A high majority of participants favoring to type in questions proved to be another option of choice, as explored in a qualitative study on physicians.⁷ These findings suggest the implications of online virtual learning platforms in health professional education and supplement existing methods in our setting. Using supplemental sources of communication such as the use of Twitter for continued medical education is becoming a new normal since the adaptability of healthcare professionals must be catered with minimum effect on routine practices with maximum outreach and connectivity.¹⁴

Online webinars are becoming popular throughout as a learning platform because of their connectivity and user-friendliness.¹⁵ The acceptability of virtual online learning through webinars and various other means has also imposed certain challenges for medical learnings. The major challenge for instructors has been to replicate the experience of scientific experiences related to practical hands-on, on the virtual platforms for the audience. The loss of face-to-face contact with peers which was otherwise common in conference attendances may result in a decrease in professional networking and collaboration. Moreover, virtual online learnings will not let us impart hands-on practice particularly during clinical training where hands-on training either on live patients or on manikins is not technically possible. This is the biggest challenges which the trainers, as well as trainees, face, but adaptation surely will come forward in future. This can be achieved to some extent by using online applications for simulation-based training, but for some medical specialties, it may remain a challenge.


Future applications will be more focused to achieve the desired outcomes related to satisfaction of the participants and clinical performance.

The future after the COVID 19 pandemic regarding continuous medical education is unpredictable, however, a hybrid model of including virtual learnings through various platforms will be more efficiently used. It might be highly unlikely that there will be a return to the previous approach that existed before the pandemic, especially after the contribution of technology for enhancing teaching and learning. Organizations have adapted the means to reach a larger population around the globe within limited resources and providing more comfortable means to the participants to attend such CME activities from their home stations. It now depends on how technology use will bring more advancements to further help in the execution process of CME activities. It will also depend on how individuals and the social system interacts and works. All these factors are related to how long the COVID 19 pandemic persists as a barrier or develops as a facilitator in main stream educational models.

Conflict of Interest: None

References

1. Lande LM. Webinar Best Practices: From Invitation to Evaluation. Wisconsin, United States: University of Wisconsin-Stout, Citeseer; 2011.
2. Dedeilia A, Sotiropoulos MG, Hanrahan JG, Janga D, Dedeilias P, Sideris M. Medical and surgical education challenges and innovations in the COVID-19 era: a systematic review. *In Vivo*. 2020; **34(3)**: 1603-1611.
3. Tanis CJ. The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning. *Res Learn Technol*. 2020; **28**: 1-25.
4. Toktarova VI, Blagova AD, Filatova AV, Kuzmin NV. Design and implementation of mobile learning tools and resources in the modern educational environment of university. *Rev Eur Stud*. 2015; **7**: 318-24.
5. Lamba P. Teleconferencing in medical education: a useful tool. *Australas Medical J*. 2011; **4(8)**: 442-7.
6. Zaragoza-Anderson KM. Online webinars for continuing medical education: an effective method of live distance learning. *Int J Instructional Tech Distance Learning*. 2008; **2(8)**: 7-14.
7. Kimura S, Onishi H, Kawamata M. Characteristics and perceptions of twice-weekly webinars for primary care physicians in Japan: a qualitative study. *Int J Med Educ*. 2018; **9**: 229-38.
8. Desai D, Sen S, Desai S, Desai R, Dash S. Assessment of online teaching as an adjunct to medical education in the backdrop of COVID-19 lockdown in a developing country - An online survey. *Indian J Ophthalmol*. 2020; **68(11)**: 2399-403.
9. Hall AK, Nousiainen MT, Campisi P, Dagnone JD, Frank JR, Kroeker KI, et al. Training disrupted: practical tips for supporting competency-based medical education during the COVID-19 pandemic. *Med Teach*. 2020; **42(7)**: 756-61.
10. Goh P-S, Sandars J. A vision of the use of technology in medical education after the COVID-19 pandemic. *MedEdPublish*. 2020; **9**: 1-8.
11. Chick RC, Clifton GT, Peace KM, Propper BW, Hale DF, Alseidi AA, et al. Using technology to maintain the education of residents during the COVID-19 pandemic. *J Surg Educ*. 2020; **77(4)**: 729-32.
12. Wagner F, Knipfer C, Holzinger D, Ploder O, Nkenke E. Webinars for continuing education in oral and maxillofacial surgery: the Austrian experience. *J Craniomaxillofac Surg*. 2019; **47(4)**: 537-41.

-
- 
13. Gegenfurtner A, Ebner C. Webinars in higher education and professional training: A meta-analysis and systematic review of randomized controlled trials. *Educ Res Rev.* 2019; **28**: 100293.
 14. Thamman R, Gulati M, Narang A, Utengen A, Mamas MA, Bhatt DL. Twitter-based learning for continuing medical education? *Eur Heart J.* 2020; **41(46)**: 4376-9.
 15. Nepal PR. Role of webinars in medical educations during pandemic of COVID 19. *East Green Neurosurg.* 2020; **2(2)**: 1-2.